

What is claimed is:

1. An optical disk apparatus comprising:

a tray means for carrying an optical disk in and out of the optical disk apparatus;

5 a chucking means for chucking the optical disk;

a laser irradiation means for emitting a laser beam that is focused on the optical disk, and for activating a focusing servo;

a moving means for moving the laser irradiation means in
10 a radial direction of the optical disk;

a measurement means for, after the chucking means has chucked the optical disk, measuring focusing drive voltages for the focusing servo at a point near a center of the optical disk and at a point near an outer edge of the optical disk, without
15 rotating the optical disk; and

a control means for comparing, with a first reference value, a difference between the focusing drive voltages measured by the measurement means, and for, when the difference between the focusing drive voltages is greater than the first reference
20 value, permitting the chucking means to release and again chuck the optical disk;

wherein, in the case where the chucking means repeats the chucking of the optical disk, the measurement means, without rotating the optical disk, again measures the focusing drive
25 voltages for the focusing servo at the point near the center

of the optical disk and the point near the outer edge of the optical disk, and the control means compares, with the first reference value, the difference between the focusing drive voltages, and when the difference is greater than the first
5 reference value, permits the chucking means to release the optical disk and the tray means to discharge the optical disk;

in the case where the measurement means measures the focusing drive voltages while the laser irradiation means is moved between the point near the center of the optical disk and the point
10 near the outer edge and the focusing servo is actuated, the control means compares, with a second reference value, a difference between the focusing drive voltages for the measurements made by the measurement means at the two adjacent points, and when the difference between the focusing drive
15 voltages is greater than the second reference value, permits the chucking means to release the optical disk and the tray means to discharge the optical disk; and

in the both cases the measurement means measures focusing drive voltages while the moving means moves the laser irradiation
20 means from the outer edge to the center.

2. An optical disk apparatus comprising:

a tray means for carrying an optical disk in and out of the optical disk apparatus;

25 a chucking means for chucking the optical disk;

a laser irradiation means for emitting a laser beam that is focused on the optical disk, and for activating a focusing servo;

a moving means for moving the laser irradiation means in
5 a radial direction of the optical disk;

a measurement means for, after the chucking means has chucked the optical disk, measuring focusing drive voltages for the focusing servo at a point near a center of the optical disk and at a point near an outer edge of the optical disk, without
10 rotating the optical disk; and

a control means for comparing, with a first reference value, a difference between the focusing drive voltages measured by the measurement means, and for, when the difference between the focusing drive voltages is greater than the first reference
15 value, permitting the chucking means to release and again chuck the optical disk.

3. The optical disk apparatus according to claim 2, wherein, in the case where the chucking means repeats the chucking of
20 the optical disk, the measurement means, without rotating the optical disk, again measures the focusing drive voltages for the focusing servo at the point near the center of the optical disk and the point near the outer edge of the optical disk, and the control means compares, with the first reference value,
25 the difference between the focusing drive voltages, and when

the difference is greater than the first reference value, permits the chucking means to release the optical disk and the tray means to discharge the optical disk.

5 4. The optical disk apparatus according to claim 2, wherein,
in the case where the measurement means measures the focusing
drive voltages while the laser irradiation means is moved between
the point near the center of the optical disk and the point
near the outer edge and the focusing servo is actuated, the
10 control means compares, with a second reference value, a
difference between the focusing drive voltages for the
measurements made by the measurement means at the two adjacent
points, and when the difference between the focusing drive
voltages is greater than the second reference value, permits
15 the chucking means to release the optical disk and the tray
means to discharge the optical disk.

5. The optical disk apparatus according to claim 2, wherein
the measurement means measures focusing drive voltages while
20 the moving means moves the laser irradiation means from the
outer edge to the center.

6. The optical disk apparatus according to claim 3, wherein
the measurement means measures focusing drive voltages while
25 the moving means moves the laser irradiation means from the

outer edge to the center.

7. The optical disk apparatus according to claim 4, wherein the measurement means measures focusing drive voltages while
5 the moving means moves the laser irradiation means from the outer edge to the center.

8. An optical disk apparatus comprising:
a tray for carrying an optical disk in and out of the optical
10 disk apparatus;
a chucking unit that chucks the optical disk;
a laser irradiation unit that emits a laser beam to be focused on the optical disk, the laser irradiation unit activating a focusing servo;
15 a moving unit that moves the laser irradiation unit in a radial direction of the optical disk;
a measurement unit that, after the chucking unit has chucked the optical disk, measures focusing drive voltages for the focusing servo at a point near a center of the optical disk
20 and at a point near an outer edge of the optical disk, without rotating the optical disk; and
a controller that compares, with a first reference value, a difference between the focusing drive voltages measured by the measurement unit, the controller permitting the chucking
25 unit to release and again chuck the optical disk when the difference

between the focusing drive voltages is greater than the first reference value.

9. The optical disk apparatus according to claim 8, wherein,
5 in the case where the chucking unit repeats the chucking of the optical disk, the measurement unit, without rotating the optical disk, again measures the focusing drive voltages for the focusing servo at the point near the center of the optical disk and the point near the outer edge of the optical disk,
10 and the controller compares, with the first reference value, the difference between the focusing drive voltages, and when the difference is greater than the first reference value, permits the chucking unit to release the optical disk and the tray to discharge the optical disk.

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10. The optical disk apparatus according to claim 8, wherein,
in the case where the measurement unit measures the focusing drive voltages while the laser irradiation unit is moved between the point near the center of the optical disk and the point
20 near the outer edge and the focusing servo is actuated, the controller compares, with a second reference value, a difference between the focusing drive voltages for the measurements made by the measurement unit at the two adjacent points, and when the difference between the focusing drive voltages is greater
25 than the second reference value, permits the chucking unit to

release the optical disk and the tray to discharge the optical disk.

11. The optical disk apparatus according to claim 8, wherein
5 the measurement unit measures focusing drive voltages while
the moving unit moves the laser irradiation unit from the outer
edge to the center.

12. The optical disk apparatus according to claim 9, wherein
10 the measurement unit measures focusing drive voltages while
the moving unit moves the laser irradiation unit from the outer
edge to the center.

13. The optical disk apparatus according to claim 10, wherein
15 the measurement unit measures focusing drive voltages while
the moving unit moves the laser irradiation unit from the outer
edge to the center.